

# Phonetics and Phonology

## FF1B

### Lecture 3

#### CLASSIFICATION OF THE SOUNDS OF ENGLISH II

#### VOWELS

Sounds are all produced in the *vocal tract*. The vocal tract refers to the parts of the body that contribute to the production of vocal sounds: the lungs, larynx, oral cavity (mouth), lips and nose.

Sounds are divided into *vowels* and *consonants*.

#### **Vowels**

are made by voiced air passing through different mouth-shapes, there is no obstruction to the flow of air; the differences in the shape of the mouth are caused by different positions of the tongue and of the lips.

**Vowels must be learned by LISTENING AND IMITATING !!!**

#### **Phonetic criteria**

Phonetic (=articulatory) criteria:

- *2 positions of the tongue:*

A. Vertical position of the tongue

- a) Close
- b) Close-mid
- c) Open-mid
- d) Open

B. Horizontal position of the tongue

- a) Front
- b) Central
- c) Back

- *3 positions of the lips:*

A. Rounded

B. Spread

C. Neutral

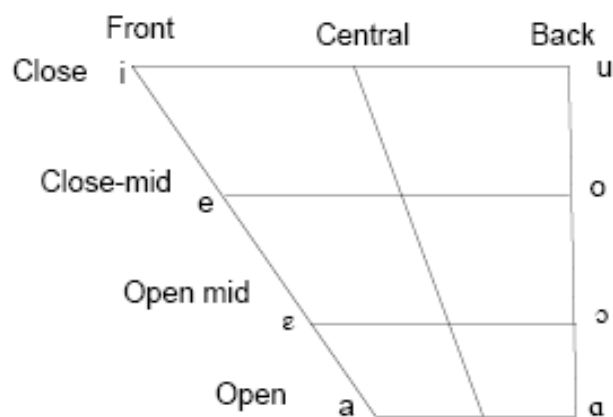
(front vowels are generally unrounded, back vowels are rounded)

#### **Cardinal vowels**

- were devised by Daniel Jones in the 20<sup>th</sup> cent,
- represent a reliable system for the classification of vowels, a standard reference system according to which vowels of any language can be compared and specified,
- they correspond to the utmost tongue positions which equal the highest degree of a certain quality (frontness, highness, etc.)

# Cardinal vowels

Cardinal vowels (= extreme pronunciation used for comparison)



## English vowels

20 vocalic sounds – 7 short monophthongs

ɪ, e, æ, ʌ, ɒ, ʊ, ə

- 5 long monophthongs

ɪ:, ɜ:, ɑ:, ɔ:, u:

- 8 diphthongs

ʊə, ɪə, eə, aɪ, ɔɪ, eɪ, əʊ, aʊ

## Short vowels

- ɪ = close, front, spread
- e = mid-close, front, spread
- æ = mid-open, front, spread
- ʌ = open-mid, central, neutral
- ə = middle, central, neutral
- ɒ = open(-mid), back, slightly rounded
- ʊ = close, back, rounded

## Long vowels

- i: close, front (more close and front than the short ɪ )
- ɜ: middle, central vowel, neutral
- ɑ: open, back, neutral
- ɔ: mid-close, back (more close than the short ɒ)
- u: close, back (more close than the short ʊ)

## DIPHTHONGS(GLIDES)

- a) Centring (=ending in /ə/)  $ʊə$ ,  $ɪə$ ,  $eə$
- b) Closing  $\left\{ \begin{array}{l} \text{ɪ-diphthongs } aɪ, ɔɪ, eɪ \\ \text{ʊ-diphthongs } əʊ, aʊ \end{array} \right.$

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Please note the diphthong  $ʊə$  displays a strong tendency to monophthongization in modern English (poor /pʊə/ or /pɔ:/

## Triphthongs

- Generated from closing diphthongs only
- 1)  $eɪ+ə=eɪə$  (layer, player)
  - 2)  $aɪ+ə=aɪə$  (liar, fire)
  - 3)  $ɔɪ+ə=ɔɪə$  (loyal, royal)
  - 4)  $əʊ+ə=əʊə$  (lower, mower)
  - 5)  $aʊ+ə=aʊə$  (power, hour)

### Discovery activity

The general aim of discovery activities is to experience the auditory, visual and physical aspects of sounds. Look at the chart of phonemic symbols and try to pronounce individual sounds (ie monophthongs, diphthongs and consonants).

To make this experience more vivid there are 3 kinds of feedback you can give yourself:

1. **kinesthetic feedback:** the internal physical sensation of touch and of muscle movement in your throat, mouth, tongue and lips, etc;
2. **auditory feedback:** what you hear, externally through the air, and internally through your head (you can even block your ears with your fingers when you speak);
3. **visual feedback:** any physical movement connected with the production of the sound that you can see in yourself or in others (it's very helpful to have a pocket mirror available).

You can also deepen your observations by making use of three kinds of voicing, each of which show different aspects of articulation:

- speaking aloud
- whispering
- mouthing silently

**For more practice look at Roach: 1995, pp. 17 and 25.**